



# SPEC® CINT2006 Result

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## Acer Incorporated

SPECint®\_rate2006 = 273

## Altos R360 F2 (Intel Xeon E5-2650)

SPECint\_rate\_base2006 = 264

CPU2006 license: 97

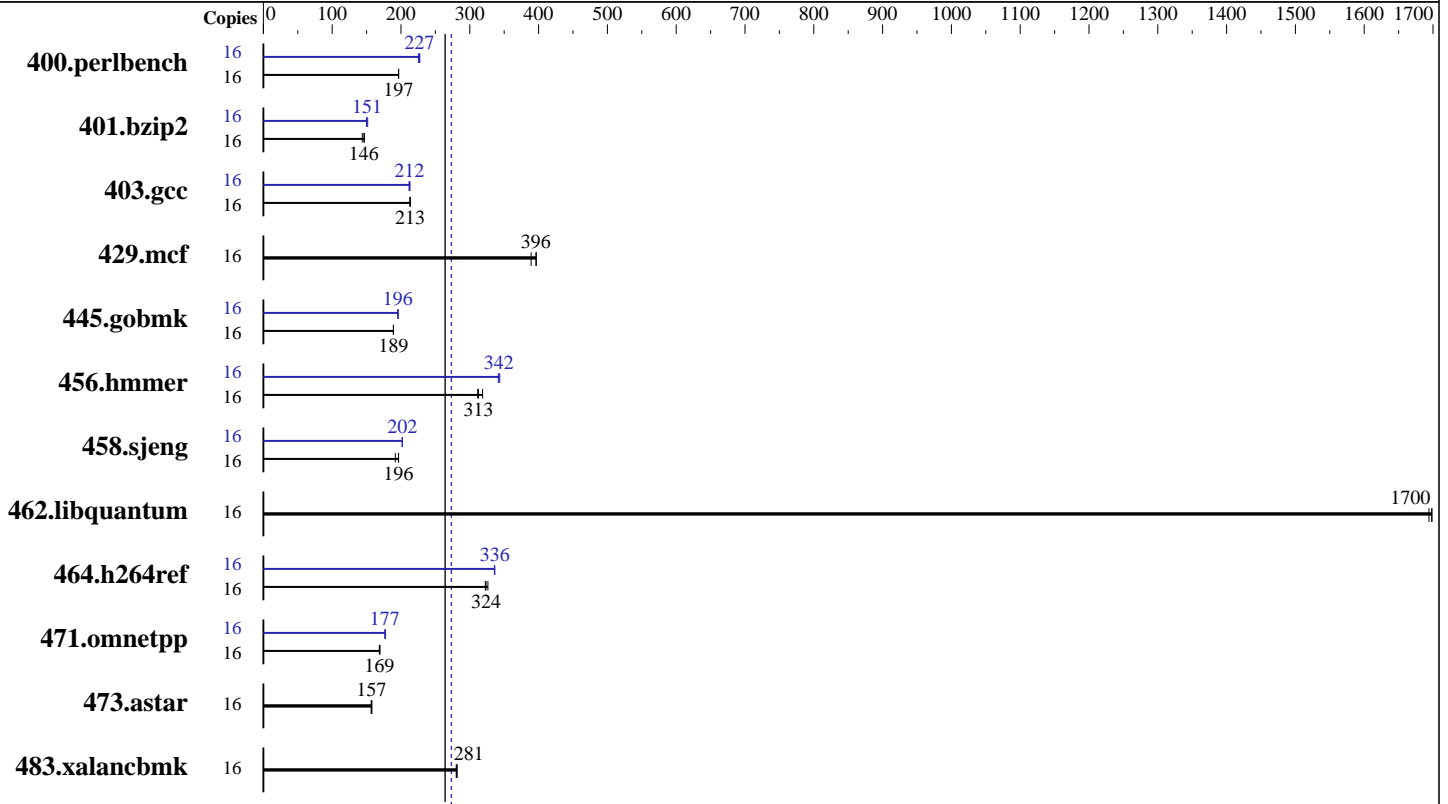
Test date: May-2013

Test sponsor: Acer Incorporated

Hardware Availability: May-2013

Tested by: Acer Incorporated

Software Availability: Feb-2013



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SPECint\_rate\_base2006 = 264

### Hardware

CPU Name: Intel Xeon E5-2650  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 1 chip, 8 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 32 GB (4 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
 Disk Subsystem: 1 x 500 GB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.3 (Santiago)  
 2.6.32-279.el6.x86\_64  
 Compiler: C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 5 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



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## Results Table

| Benchmark      | Base   |            |            |             |             |             |            | Peak   |             |            |            |             |             |            |
|----------------|--------|------------|------------|-------------|-------------|-------------|------------|--------|-------------|------------|------------|-------------|-------------|------------|
|                | Copies | Seconds    | Ratio      | Seconds     | Ratio       | Seconds     | Ratio      | Copies | Seconds     | Ratio      | Seconds    | Ratio       | Seconds     | Ratio      |
| 400.perlbench  | 16     | 796        | 196        | 795         | 197         | <b>795</b>  | <b>197</b> | 16     | 694         | 225        | <b>689</b> | <b>227</b>  | 688         | 227        |
| 401.bzip2      | 16     | 1074       | 144        | <b>1057</b> | <b>146</b>  | 1052        | 147        | 16     | <b>1025</b> | <b>151</b> | 1018       | 152         | 1031        | 150        |
| 403.gcc        | 16     | 604        | 213        | <b>604</b>  | <b>213</b>  | 604         | 213        | 16     | 608         | 212        | <b>607</b> | <b>212</b>  | 604         | 213        |
| 429.mcf        | 16     | 375        | 389        | <b>368</b>  | <b>396</b>  | 368         | 397        | 16     | 375         | 389        | <b>368</b> | <b>396</b>  | 368         | 397        |
| 445.gobmk      | 16     | 888        | 189        | <b>888</b>  | <b>189</b>  | 887         | 189        | 16     | 859         | 195        | <b>858</b> | <b>196</b>  | 856         | 196        |
| 456.hammer     | 16     | 469        | 319        | <b>478</b>  | <b>313</b>  | 479         | 312        | 16     | <b>436</b>  | <b>342</b> | 437        | 341         | 434         | 344        |
| 458.sjeng      | 16     | 1010       | 192        | <b>986</b>  | <b>196</b>  | 985         | 197        | 16     | 959         | 202        | <b>959</b> | <b>202</b>  | 959         | 202        |
| 462.libquantum | 16     | 195        | 1700       | <b>195</b>  | <b>1700</b> | 196         | 1690       | 16     | 195         | 1700       | <b>195</b> | <b>1700</b> | 196         | 1690       |
| 464.h264ref    | 16     | 1098       | 323        | 1085        | 326         | <b>1094</b> | <b>324</b> | 16     | 1054        | 336        | 1053       | 336         | <b>1053</b> | <b>336</b> |
| 471.omnetpp    | 16     | <b>592</b> | <b>169</b> | 590         | 169         | 594         | 168        | 16     | 563         | 178        | 566        | 177         | <b>566</b>  | <b>177</b> |
| 473.astar      | 16     | 717        | 157        | <b>715</b>  | <b>157</b>  | 712         | 158        | 16     | 717         | 157        | <b>715</b> | <b>157</b>  | 712         | 158        |
| 483.xalancbmk  | 16     | <b>392</b> | <b>281</b> | 392         | 281         | 394         | 280        | 16     | <b>392</b>  | <b>281</b> | 392        | 281         | 394         | 280        |

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor. For details, please see the config file.

This result was measured on Altos R360 F2.

Altos R360 F2 and Altos R380 F2 are electronically equivalent.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

Sysinfo program /usr/cpu2006/config/sysinfo.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on localhost.localdomain Tue May 28 05:43:30 2013

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:  
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo  
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz  
1 "physical id"s (chips)  
16 "processors"  
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

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## Platform Notes (Continued)

```
cpu cores : 8
siblings  : 16
physical 0: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

```
From /proc/meminfo
MemTotal:      32851048 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.3 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux localhost.localdomain 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36
EDT 2012 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 5 May 27 15:34 last=3
```

```
SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root
ext4            443G    33G  388G   8% /
```

Additional information from dmidecode:

```
BIOS Acer Inc. P03 07/26/2012
Memory:
4x 8 GB
1x DimmA2_Manufacturer DimmA2_PartNumber
1x DimmA3_Manufacturer DimmA3_PartNumber
1x DimmB2_Manufacturer DimmB2_PartNumber
1x DimmB3_Manufacturer DimmB3_PartNumber
1x DimmC2_Manufacturer DimmC2_PartNumber
1x DimmC3_Manufacturer DimmC3_PartNumber
1x DimmD2_Manufacturer DimmD2_PartNumber
1x DimmD3_Manufacturer DimmD3_PartNumber
1x DimmE1_Manufacturer DimmE1_PartNumber
1x DimmE2_Manufacturer DimmE2_PartNumber
1x DimmE3_Manufacturer DimmE3_PartNumber
1x DimmF1_Manufacturer DimmF1_PartNumber
1x DimmF2_Manufacturer DimmF2_PartNumber
1x DimmF3_Manufacturer DimmF3_PartNumber
1x DimmG1_Manufacturer DimmG1_PartNumber
1x DimmG2_Manufacturer DimmG2_PartNumber
1x DimmG3_Manufacturer DimmG3_PartNumber
1x DimmH1_Manufacturer DimmH1_PartNumber
1x DimmH2_Manufacturer DimmH2_PartNumber
```

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## Platform Notes (Continued)

1x DimmH3\_Manufacturer DimmH3\_PartNumber

4x Hynix Semiconductor HMT31GR7CFR4C-PB 8 GB 1600 MHz 1 rank

(End of data from sysinfo program)

## General Notes

Environment variables set by runspec before the start of the run:

LD\_LIBRARY\_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB  
memory using RHEL5.5

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

## Base Compiler Invocation

C benchmarks:

icc -m32

C++ benchmarks:

icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

-Wl,-z,muldefs -L/sh -lsmartheap

## Base Other Flags

C benchmarks:

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## Base Other Flags (Continued)

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmer: -DSPEC\_CPU\_LP64

458.sjeng: -DSPEC\_CPU\_LP64

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32

401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch  
-auto-ilp32 -ansi-alias

403.gcc: -xAVX -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3

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## Peak Optimization Flags (Continued)

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4  
-auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias  
-opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130716.html>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130716.xml>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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